

## □GENERAL INFORMATION

The Geosciences of Natural Resources laboratory (GeNaR), faculty of sciences of Ibn Tofail University in collaboration with the Functional and Environmental Ecology Laboratory (EcoLab) joint research unit (UMR 5245) involving the CNRS, the University Paul Sabatier of Toulouse III and the National Polytechnic Institute of Toulouse co-organize the - Introductory SWAT Workshop, which will be held in Morocco, from 11 to 14 December, 2018.

The course is opened to professionals, graduate and post-graduate students, who use or will use SWAT in order to investigate hydrologic and water quality issues in watersheds and rivers. The languages of the Workshop are English and French. Participants are encouraged to bring their own laptop.

Please visit (<http://swatmodel.tamu.edu/>) for further details about SWAT and a free software download.

▪The interested persons in this training offer are requested to contact the members of the local organizing committee for registration and booking of accommodation. the amount of the total fees (300 Euros (for the students), 500 Euros (for others) must be paid before November 30, 2018 by bank transfer to university account bank:

**310 330 1006 021 7019801 01 68**

The training will be provided by SWAT Experts from the Toulouse Polytechnic Institute.

The number of seats is limited to 25 participants.

A certificate will be given to all participants after the completion of the workshop.

## □PROGRAM FOR SWAT BEGINNERS

WORKSHOP 11 to 14 December 2018

### DAY 1

(Tuesday, 11 December 2018)

09h00 - 09h15: Registration

09h15-10h : Welcome/Introduction

10h00-11h00:SWAT Theory

11h00 - 11h30 : Coffee break

11h30 - 12h00 : Study case

12h00 -14h00: Lunch

14h00- 15h45 : Model overview (Theory)

15h45 -16h00 : Coffee break

16h00 - 18h00: Model applications (Theory)

### DAY 2

(Wednesday, 12 December 2018)

09h00 -10h30: Theory and Application of SWAT

10h30 -10h45: Coffee break

10h45-12h30: Introduction to SWAT/ArcGIS interface (GIS) and QSWAT

12h30 - 14h00 :Lunch

14h00 - 16h00 : Watershed delineation /  
Land use and soil overlay

16h00 -16h15: Coffee break

16h15 - 18h00 : Watershed delineation /  
Land use and soil overlay



**Ibn Tofail University  
Faculty of Sciences  
Kénitra, Morocco**

# Beginner SWAT Workshop

**December 11-14, 2018**



## □THE SWAT MODEL

The Soil and Water Assessment Tool (SWAT) is a public domain model actively supported by the USDA Agricultural Research Service at the Grassland Soil and Water Research Laboratory in Temple, Texas, USA.

SWAT is a river basin-scale model to simulate the quality and quantity of surface and shallow ground water and predict the environmental impact of land management practices on different soil patterns and land use patterns. SWAT is widely used in assessing soil erosion prevention and control, non-point source pollution control and regional management in watersheds.

The main purpose of the model is to predict the effects of management decisions on water, nutrients, sediments and pesticide yield with reasonable accuracy on large, ungauged river basins. It is a distributed model that simulates all previously mentioned constituents on a daily time step.

SWAT defines hydrology by a specific list of parameters including interception, evapotranspiration, surface runoff, lateral flow, soil percolation and groundwater flow, as well as river routing processes.

## □Program

### DAY 3

09h00 -10h30: HRU delineation

10h30 -10h45: Coffee break

10h45 - 12h30: Weather and remaining inputsto develop the SWAT model

(including point sources)

12h30 - 14h00 : Lunch

14h00 - 16h00 : Review of summary outputs

16h00 -16h15: Coffee break

16h15 - 18h00 : Finish SWAT simulation using QSWAT

### •DAY 4

09h00 -10h30: Visualization and interpretation of SWAT outputs through GenScn

10h30 -10h45: Coffee break

10h45 - 12h30: Introduction of calibration and validation techniques / Address user requests and answer questions

12h30 - 14h00 : Lunch

14h00- 16h00 : Review model calibration through the model interface

16h00 -16h15: Coffee break

16h15 - 18h00 : Address user requests and clarify anything covered on the first two days

## □ORANIZING COMMITEE

-Pr. Souad haida (UIT, GeNaR, Kénitra, Morocco)

-Pr. Bouabid El mansouri (UIT, GeNaR, Kénitra, Morocco)

-Pr. Aziz Mrideck (UIT, GeNaR, Kénitra, Morocco)

-Dr. José Miguel Sánchez-Pérez (CNRS, ECOLAB, Toulouse, France)

-Dr. Sabine Sauvage (CNRS, ECOLAB, Toulouse, France)

### •For more information contact (Local organizing Committee):

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### •REGISTRATION FEE

Introductory workshop (4 days)

▪ Standard 500 € ,

▪Students: 300 € .

The fee includes the accommodation, registration kit, course material, coffee break, lunch on all working days. Participants shall have to arrange for their Transport.